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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,203

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Christopher Nutbeam

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
LLP

901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER

ABU ALI, SHUANGYI

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

08/05/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,203	Applicant(s) NUTBEEM ET AL.	
	Examiner SHUANGYI ABU ALI	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-69 is/are pending in the application.
- 4a) Of the above claim(s) 61-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under Ex Parte Quayle, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 05/19/2009 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 15-25, 28-38, 41-52, and 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,758, 895 to Wesley, in view of U.S. Patent No. 5, 833, 747 to Bleakly et al.

Regarding claims 15-16, 28, 30, 41, 44-46, 51-52, Wesley discloses a composition comprising a kaolin composition, which has a shape factor of larger than 40 and a steepness of larger than 36, and a calcium carbonate composition. (example 1 and table 1)

But they are silent that the calcium carbonate is precipitated calcium carbonate (PCC) and has a crystal structure of as applicant set forth in the instant application.

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use PCC with crystal structure of aragonite or rhombohedra, motivated by the fact that Bleakly et al., also dawn to paper filler, disclose that PCC is cheap and has good brightness, opacity (col.1, lines 210-15, 20-21 and claim 1)

Regarding claims 17-25, 29, 31-38, 42-43, Bleakly disclose that the PCC has a particle size of 50-80% less than 0.5 micron, 10-45% less than 0.25 micron and 96-99% less than 1 micron. (col. 4, lines 25-41)

Regarding claims 47-50, Wesley et al disclose that the average particle size is less than about 0.5 micron (col.2, lines 56-60)

Regarding claims 58- 60, Bleakly et al. disclose that the pigment mixture comprises of 5-99% of calcium carbonate. (col. 5, line 60-col6, lines 3)

Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teaching of U. S. Patent. No. 6,758,895 to Wesley and U. S. Patent No. 5,833,747 to Bleakly et al., further in view of U. S. Patent No. 6,251,356 to Mathur.

Regarding claim 26-27, combined teaching of Bleakly and Wesley disclose a composition set forth above. But they are silent about the PCC (rhombohedra) brightness as applicant set forth in the instant application.

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use the PCC having a brightness at least 92, motivated by the fact that Mathur, also dawn to paper filler, disclose that the PCC (rhombohedra) having a brightness of at 95 is preferred to be used in paper making to obtain desired opacity, density and brightness (abstract and example 7)

Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teaching of U. S. Patent. No. 6,758,895 to Wesley and U. S. Patent No. 5,833,747 to Bleakly et al., further in view of U. S. Patent No. 7,048,900 to Mathur

Regarding claims 39 and 40, combined teaching of Bleakly and Wesley disclose a composition set forth above. But they are silent about the PCC (aragonite) brightness as applicant set forth in the instant application.

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use the PCC having a brightness at least 92, motivated by the fact that Mathur, also dawn to paper filler, disclose that the PCC (aragonite) having

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a brightness of at 95 is preferred to be used in paper making to obtain desired opacity, and brightness. (col. 1, lines 28-30 and example 12)

Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teaching of U. S. Patent. No. 6, 758, 895 to Wesley and U. S. Patent No. 5, 833, 747 to Bleakly et al., further in view of U.S. Patent No. 4, 492, 628 to Young et al.

Combined teaching of Bleakly and Wesley et al. disclose a composition comprising calcium carbonate and kaolin as applicant set forth in claim 15, but they are silent about the percentage of the kaolinite in the kaolin composition.

However, it would have been obvious to one of ordinary skill in art at the time of invention by applicant to use high purity kaolin (high amount of kaolinite), motivated by the fact that Young et al. also dawn to paper filler, disclose that high purity kaolin (high amount of kaolinite) can produce high quality paper(col.1, lines 24-30).

Claims 15 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent. No. 6,808, 559 to Golley et al, in view of U. S. Patent No. 4,888,160 to Kosin et al.

Regarding claims 15 and 56-57, Golley et al. disclose a composition comprising kaolin and PCC. The kaolin has a shape factor of larger than 30, a steepness of at least 30 (claims 3 and 11) and a brightness of at least 92.

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But they are silent that the calcium carbonate is precipitated calcium carbonate (PCC) and has a crystal structure of aragonite

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use PCC with crystal structure of aragonite, motivated by the fact that Kosin et al, also dawn to paper filler, disclose that PCC with aragonite is pure and exhibits good brightness and opacity. (col.1, lines 21-35)

Claims 15, 30-37, 39-41, 44-46, 51-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,833,747 to Bleakly, in view of WO 02/16511 to Johns

Regarding claims 15-16, 28, 30, 39-41, 44-46, 51-52, 56-57, Bleakly discloses a composition comprising a PCC (aragonite or rhombohedra) composition and a kaolin composition, where the PCC has a defined sizes. The Kaolin composition is platy kaolin. But 'Bleakly is silent about the property as applicant set forth in claim 15

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to choose the steepness factor and shape factor as applicant set forth in the instant application, motivated by the fact that Johns , also drawn to kaolin product , discloses that good quality paper((printability, brightness and porosity) is obtained by using a kaolin composition having combination of values of steepness factor larger than 32, shape factor larger than 30 and a brightness of larger than 82. (Page 7- page 8).

Regarding claims 17-25, 29, 31-38, 42-43, Bleakly discloses that the PCC has a particle size of 50-80% less than 0.5 micron, 10-45% less than 0.25 micron and 96-99% less than 1 micron. (col. 4, lines 25-41)

Regarding claims 47-50, Johns disclose that the kaolin has a mean diameter in the range of 0.5-2 micron (page 7).

Regarding claims 58-60, 'Bleakly discloses a pigment mixture comprising 5-99% of calcium carbonate. (col. 5, line 60-col6, line 3)

Response to Arguments

Applicant's arguments filed 03/19/2009 have been fully considered but they are not persuasive.

The rejection based on Lyon is withdrawn based on the amendment that the shape factor is larger than 25.

Applicant argues that the Bleakly disclose that the aspect ratio of the kaolin is not the same as the shape factor. The Examiner respectfully submits that Bleakly is used to show the property of the calcium carbonate. The shape factor is disclosed by the teaching Wesley or Johns.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

/Shuangyi Abu-Ali/
Examiner, Art Unit 1793